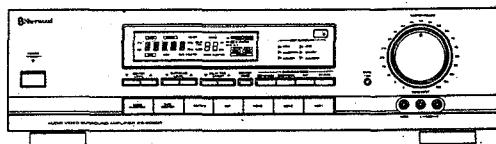


OPERATING INSTRUCTIONS
BEDIENUNGSANLEITUNG



ES-5030R

*AudioVideo Surround Amplifier
Audio/Video-Surround-Verstärker*

S Sherwood®



Unpacking and Installation

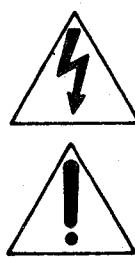
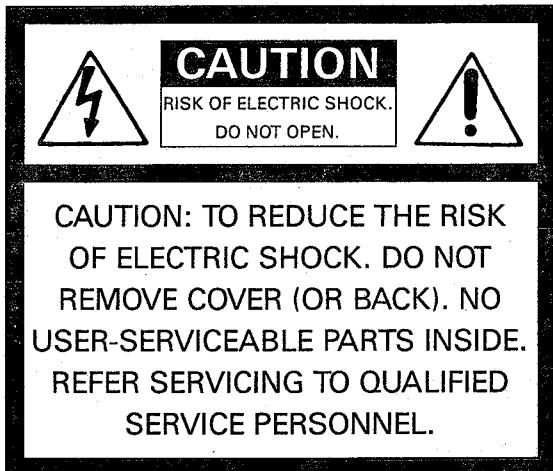
ENGLISH

Congratulations on Your Purchase!

Your new high fidelity Amplifier is designed to deliver maximum enjoyment and years of trouble free service. Please take a few moments to read this manual thoroughly. It will explain the features and operation of your unit and help a trouble free installation.

Please unpack your unit carefully. We recommend that you save the carton and packing material. They will be helpful if you ever need to move your unit and may be required if you ever need to return it for service. Your unit is designed to be placed in a horizontal position and it is important to allow at least two inches of space behind your unit for adequate ventilation and cabling convenience.

To avoid early damage, never place the unit near radiators, in front of heating vents, in direct sunlight, or in excessively humid or dusty location. Connect your complementary components as illustrated in the following section.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Caution: Do not block ventilation openings or stack other equipment on top.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Read this Before Operating Your Unit

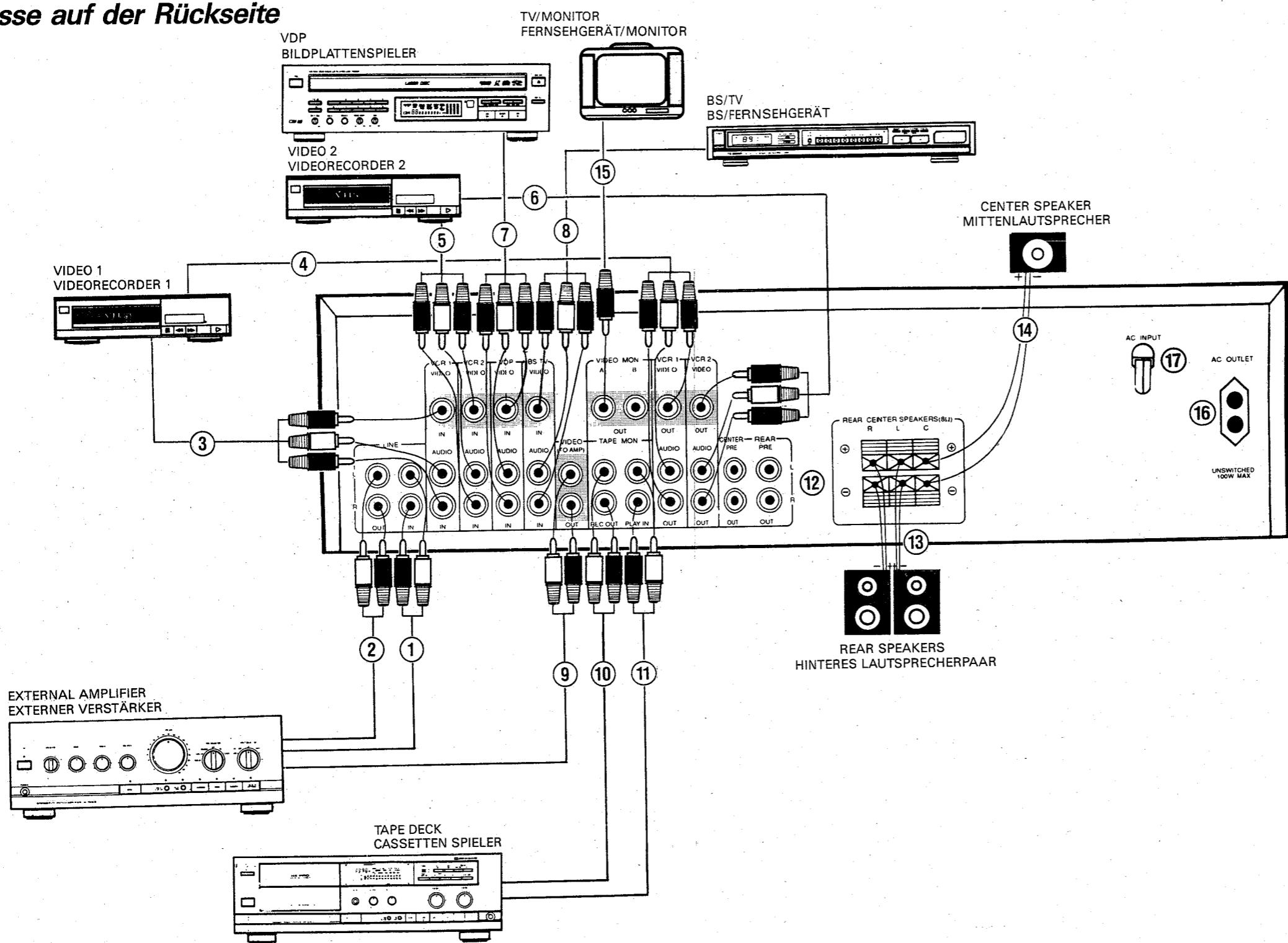
For Europe 220V/240V

FOR YOUR SAFETY

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities. The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician. Pan-European unified voltage.

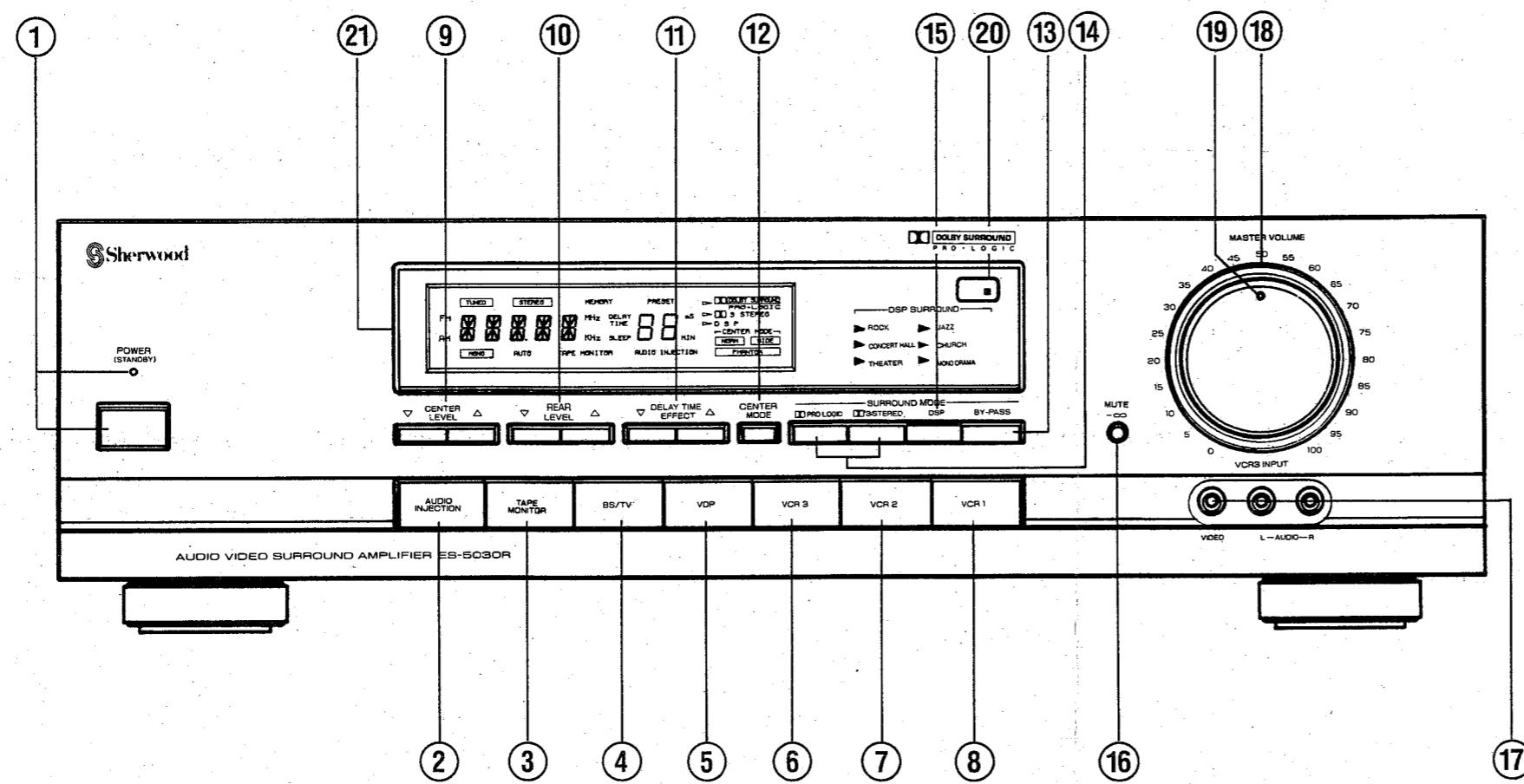
All units are suitable for use on supplies 220-240V AC.

Rear Panel Connections Anschlüsse auf der Rückseite



Front Panel Controls

Bedienungselemente auf der Vorderseite



Rear Panel Connections

- * When plugging and unplugging connection cords, be sure to first remove the power cord from the AC wall outlet.
- * Loose or incorrect connections will result in poor sound or improper operation.

1. LINE IN

Connect these to the EXT OUT jacks of the amplifier.

2. LINE OUT

Connect these to the EXT IN jacks of the amplifier.

If there are no EXT IN/OUT jacks, connect these to the TAPE MON IN/OUT jacks and press the TAPE MON button of the amplifier.

3. VIDEO/AUDIO INPUT (PLAY) JACKS OF VCR 1

Connect these jacks to the video and audio outputs of your TV or VCR.

4. VIDEO/AUDIO OUTPUT (REC) JACKS OF VCR 1

Connect these jacks to the video and audio inputs of your TV or VCR.

VIDEO OUTPUT jack: The video signal from this jack is fed to the video input of the VCR for recording, copying or editing.

AUDIO OUTPUT jacks: The audio signals from these left and right jacks are fed to the left and right audio inputs of the VCR for recording, copying or editing.

5. VIDEO/AUDIO INPUT (PLAY) JACKS OF VCR 2

Connect these jacks to the video and audio outputs of your TV or VCR.

6. VIDEO/AUDIO OUTPUT (REC) JACKS OF VCR 2

Connect these jacks to the video and audio inputs of your TV or VCR.

VIDEO OUTPUT jack: The video signal from this jack is fed to the video input of the VCR for recording, copying or editing.

AUDIO OUTPUT jacks: The audio signals from these left and right jacks are fed to the left and right audio inputs of the VCR for recording, copying or editing.

7. VIDEO/AUDIO INPUT (PLAY) JACKS OF VDP

Connect these jacks to the video and audio outputs of your LD player (VDP) or CDV player.

8. VIDEO/AUDIO INPUT (PLAY) JACKS OF BS/TV

Connect these jacks to the video and audio outputs of your TV or BS/TV.

9. VIDEO OUT (TO AMP)

Audio signal of the VCR 1, VCR 2, VCR 3, BS/TV or VDP comes out through these jacks.

Connect those to the VIDEO or AUX jacks of the amplifier.

10. TAPE REC JACKS

Connect the line inputs of your TAPE DECK to these jacks.

11. TAPE PLAY JACKS

Connect the line outputs of your TAPE DECK to these jacks.

12. CENTER OR REAR PRE OUTPUT JACKS

By connecting the external power amplifier to this amplifier, you can strengthen the sound from the center or rear speakers.

NOTE: The signal for center speaker is monaural.

13. REAR SPEAKER TERMINALS

Connect the rear speakers to these terminals. Use rear speakers which have the nominal impedance of 8 to 16 ohms for safe and best operation.

14. CENTER SPEAKER TERMINALS

Connect the center speaker to these terminals. Use center speaker which has the nominal impedance of 8 to 16 ohms for safe and best operation.

NOTES:

1. Take care so as not to short the positive (+) and negative (-) speaker cord.
2. When connecting the speakers, make sure that the polarity (+ and -) of the speaker cord is correct.

15. VIDEO MONITOR JACKS (A and B)

Connect this jack to the video input of your TV or TV MONITOR.

16. AC OUTLET "UNSWITCHED"

If the amplifier is plugged in, this outlet provides power and can be used for other equipment.

NOTE: Do not plug high-wattage equipment such as an iron or toaster in this outlet lest the power consumption should exceed the maximum value shown at this outlet.

17. AC INPUT CORD

Plug this cord into wall AC outlet.

Front Panel Controls

1. POWER BUTTON/STANDBY INDICATOR

Press this button to on. Press again to off.

NOTE: When the power is off, the STANDBY indicator lights up and the power is partially supplied into the infrared remote control receiver and the memory circuitry to receive the signal from the commander.

2. AUDIO INJECTION BUTTON

Press the button when it is necessary to replace the sound of VCR or VDP with that of an AUDIO source such as CD during video dubbing.

NOTE: When this function is working, do not use the MUTE and TAPE MONITOR functions.

3~8. INPUT SELECT BUTTONS

Buttons for selecting desired program source; VCR 1, VCR 2, VCR 3, BS/TV, VDP or TAPE MONITOR.

9. CENTER LEVEL UP/DOWN BUTTONS

Use these buttons to adjust the sound level of the center speakers to that of the front speakers.

Operate when Dolby Pro Logic or Dolby 3 stereo mode is ON. After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.

10. REAR LEVEL UP/DOWN BUTTONS

Operate only when the surround mode is on. These buttons are used to preset the sound level difference between the front and rear speakers. For the adjustment, set the MASTER VOLUME control at the desired level and press these buttons until you get the optimum surround effect at your listening position.

11. DELAY TIME/SOUND EFFECT BUTTONS

These buttons operates in Dolby Pro Logic and DSP mode.

Select appropriate delay time to achieve the best surround sound effect. For Dolby Pro Logic surround, we recommend a 20ms delay.

The delay time/sound effect is changed as follows, whenever these buttons are pressed.

(Dolby Pro Logic mode)

15ms \longleftrightarrow 20ms \longleftrightarrow 25ms \longleftrightarrow 30ms

(DSP mode)

10 \longleftrightarrow 20 \longleftrightarrow 30 \longleftrightarrow ... \longleftrightarrow 80 \longleftrightarrow 90

In Dolby 3 stereo mode, there is no surround output and the DELAY TIME/SOUND EFFECT buttons do not operate.

12. CENTER MODE BUTTON

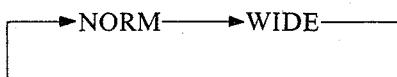
This button operates only in Dolby Pro Logic and Dolby 3 stereo modes.

The mode changes as follows, whenever this button is pressed.

(Dolby Pro Logic mode)

→ OFF → NORM → WIDE → PHANTOM

(Dolby 3 stereo mode)



NORMAL :— Use this setting when a small enclosure center channel speaker incapable of reproducing frequencies below 100 Hz is connected.

WIDE — Use this setting when a large enclosure center channel speaker capable of reproducing frequencies below 100 Hz is connected.

PHANTOM — Use this setting when no center channel speaker is connected.

NOTE: If no center speaker is used, then mono signals and center channel signal components will not be reproduced at positions other than the PHANTOM position.

13. BY-PASS BUTTON

If you want only sound from front speakers without that from center and rear speaker, press this button.

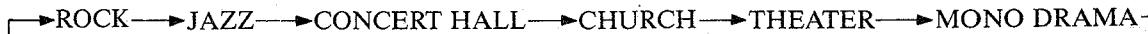
14. SURROUND MODE SELECT BUTTONS

These are buttons for selecting desired surround mode; DSP, Dolby 3 stereo, Dolby Pro Logic. See pages 17, 18.

The mode indicators '▶' or '▷' indicates the selected mode. In the surround OFF mode, the indicator disappears.

15. DSP MODE SELECT BUTTON

Use to select the programmed sound effects such as CONCERT HALL, JAZZ, ROCK, CHURCH, THEATER and MONO DRAMA by DSP (Digital Signal Processor). This button reproduces the early reflection sound and the reverberation sound using DSP to enjoy several sound effects in your listening room. Each time this button is pressed the surround modes change as follows, and the relevant indicator is on.



16. MUTE BUTTON

Use to temporarily cut sound volume. When the MUTE button is pressed, the volume indicator on the volume control of the front panel will flicker.

This is very useful when you make or receive phone call while operating the Amplifier at high listening level, or when you adjust extremely low volume level at midnight.

To release muting, press MUTE button again.

17. VIDEO/AUDIO INPUT (PLAY) JACKS OF VCR 3

Connect these jacks to the video and audio input jacks of your TV or VCR. These jacks are convenient to use CAMCORDER or portable VCR.

18. MASTER VOLUME CONTROL

Turn the volume clockwise to increase the volume and counterclockwise to decrease it.

The overall volume of the front, center, and rear speakers is changed together.
is pressed.

19. VOLUME LEVEL INDICATOR

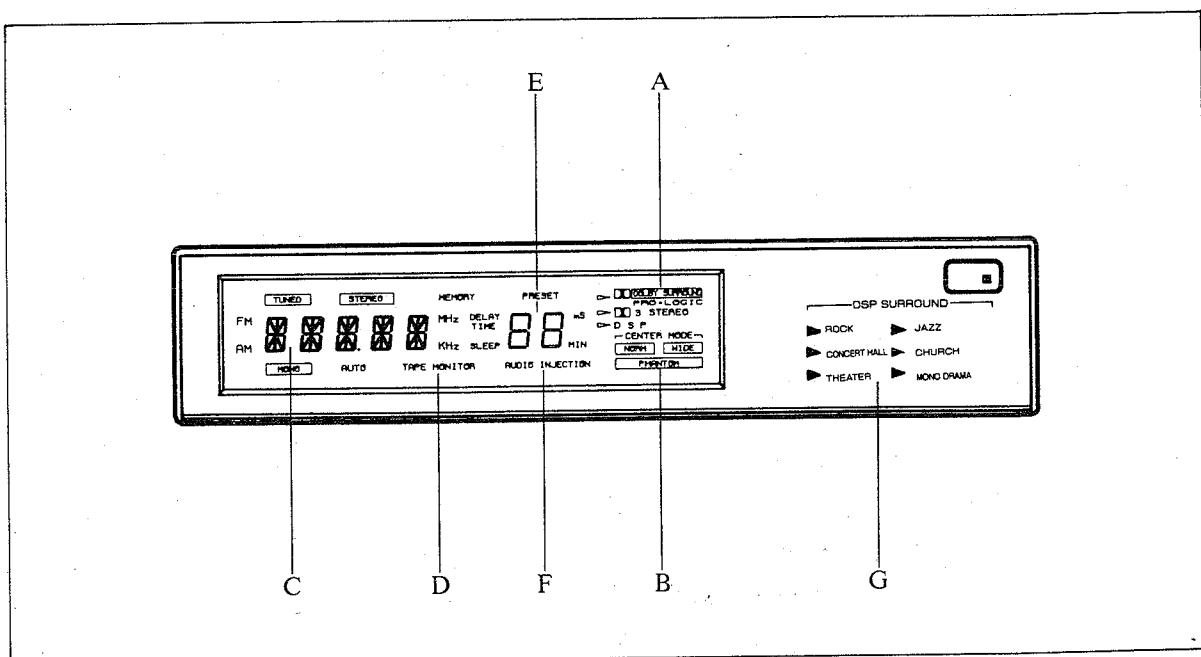
This indicator moves in accordance with the volume level. This indicator will flicker when the mute button is pressed.

20. INFRARED RECEIVER WINDOW

This receive the signals from the remote commander.

21. FLUORESCENT DISPLAY PANEL

This display panel indicates the status of the operations for easier control of the Amplifier.

**A. SURROUND MODE INDICATORS**

The indicator of the selected surround mode shows. In surround off mode, these indicators disappears.

B. CENTER MODE INDICATORS

The relevant indicators light up when Dolby Pro Logic or Dolby 3 stereo is selected.

C. INPUT FUNCTION, CENTER and REAR LEVEL DISPLAY

This display shows the input function or center or rear level.

D. TAPE MONITOR INDICATOR

This indicator lights up when TAPE MONITOR is set to ON.

E. DELAY TIME and SOUND EFFECTS DISPLAY

This display shows delay time or sound effects.

F. AUDIO INJECTION INDICATOR

This indicator lights up when the AUDIO INJECTION button is pressed.

G. DSP SURROUND MODE INDICATORS

These indicators show the DSP surround mode that selected by DSP BUTTON.

Extended Connections

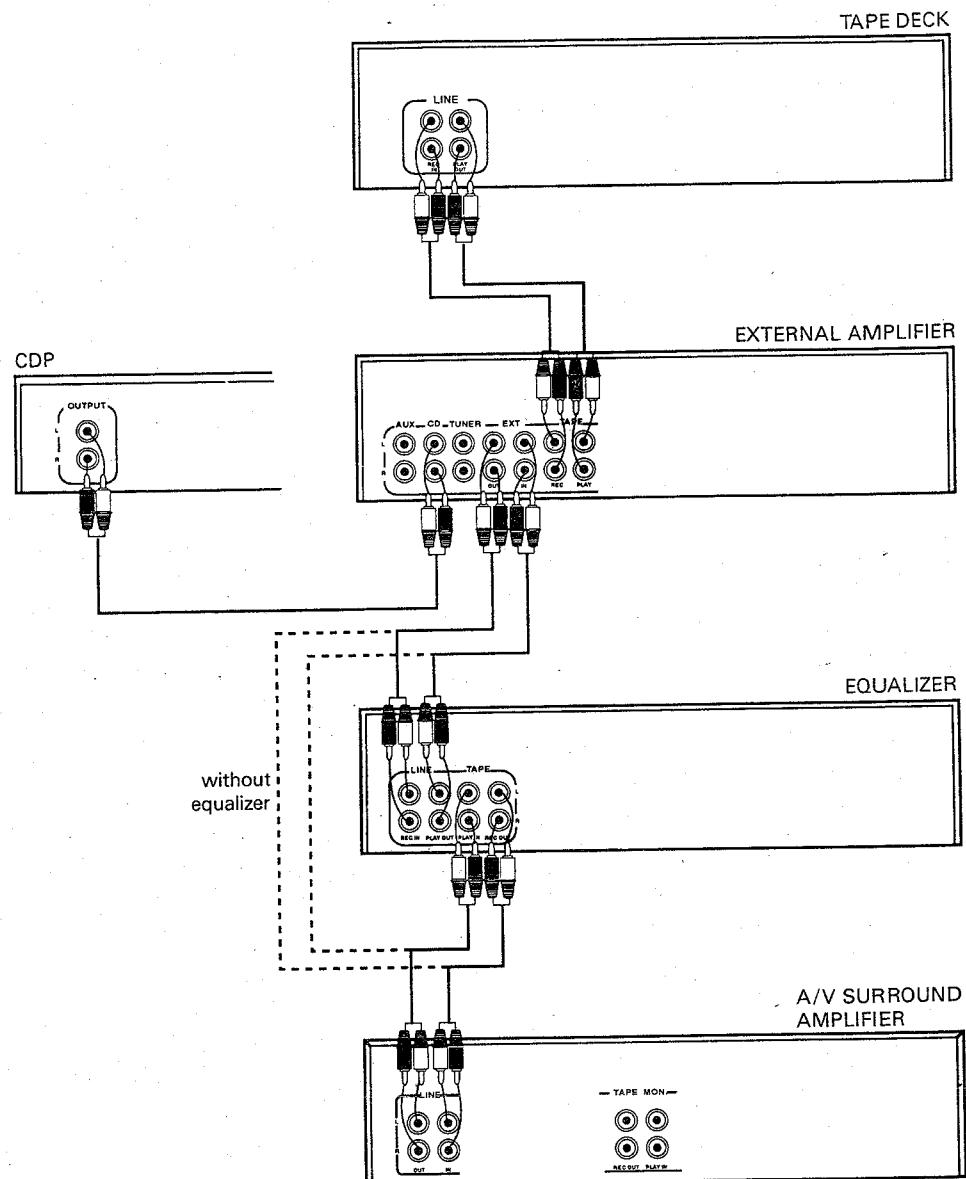
ENGLISH

When using with another Amplifier which has EXT.PROS IN/OUT jacks or button positions of each unit.

External Amplifier: the desired listening source

Equalizer: TAPE MONITOR

A/V Surround Amplifier: the desired listening source

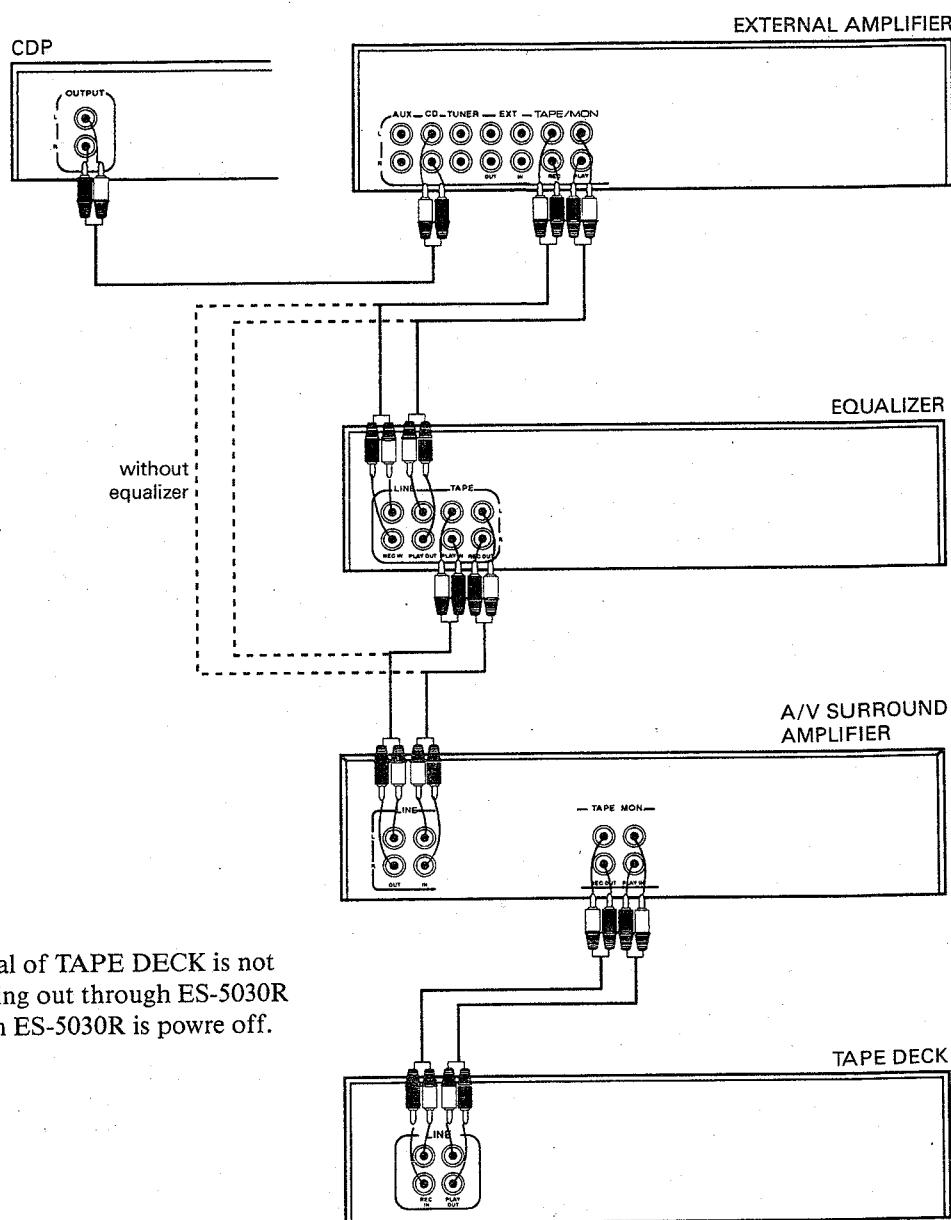


When using with another Amplifier which has TAPE MONITOR INPUT/OUTPUT jacks switch or button positions of each unit.

External Amplifier: the desired listening source and TAPE MONITOR

Equalizer: TAPE MONITOR

A/V Surround Amplifier: the desired listening source



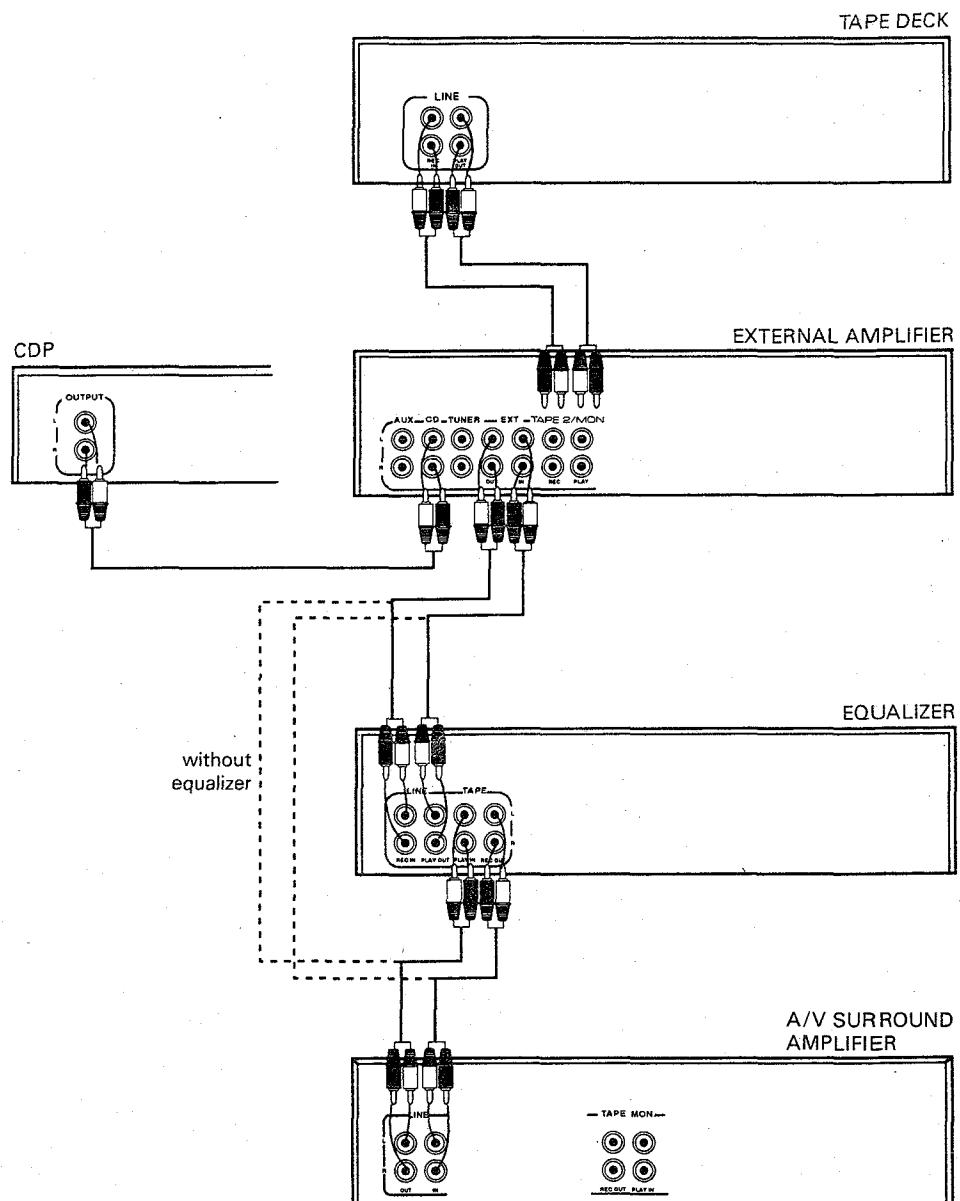
Signal of TAPE DECK is not coming out through ES-5030R when ES-5030R is power off.

When using with another Amplifier which has TAPE 2/MONITOR INPUT/OUTPUT jacks switch or button positions of each unit.

External Amplifier: the desired listening source and TAPE 2/MONITOR

Equalizer: TAPE MONITOR

A/V Surround Amplifier: the desired listening source



About Advanced Sound Options

The ES-5030R has special sound options such as Digital Signal Processing, DOLBY 3 STEREO LOGIC and DOLBY PRO LOGIC SURROUND. Enjoy the presence and the expansive effect of surround sound.

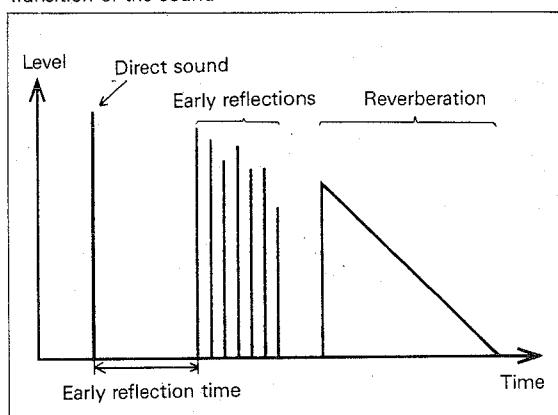
DIGITAL SIGNAL PROCESSING

The sound heard in a concert hall or a church, etc. is the compound of direct sound, early reflected sound and reverberative sound. According to the structure and characteristic of the room, the acoustics influence these three sounds.

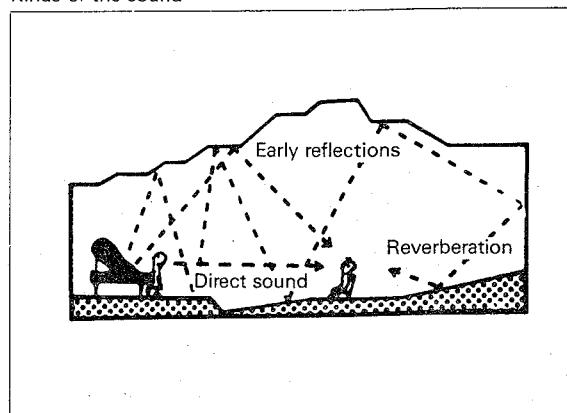
The simulated surround sound by digital signal processing creates early reflected sound and reverberative sound.

The ES-5030R incorporates 6 types of the SOUND FIELD program and you can select the desired SOUND FIELD mode with the DSP mode select button.

Transition of the sound



Kinds of the sound



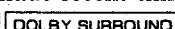
CHARACTERISTICS OF THE SOUND FIELD PROGRAM

SOUND FIELD	Characteristics	Appropriate music source
ROCK	Adds the reflection of large concert hall and reproduce the dynamic sounds.	Pop or rock music.
JAZZ	Reproduces the acoustics of a live house. The equalizer boosts high frequencies, adding sharpness to sounds.	Jazz
CONCERT HALL	Reproduces the acoustics of a rectangular concert hall with soft sound. It is effective for playing a program source with hard sound.	Solo, medium-size orchestra or classic
CHURCH	Reproduces the acoustics of a church made of wood.	Baroque music, string orchestra or choral group
THEATER	Adds the reflection of a theater to decoded signals of the Dolby pro logic decoder.	Dolby surround processed movie software
MONO DRAMA	Transforms monaural signals into simulated stereo sounds.	Monaural source

- Dolby 3 stereo

Combining the rear speaker signal with that of the front speakers results in your being able to enjoy a regenerated sound field which has comparatively more presence and a more expansive feeling from the front 3 channels (front L, front R and center speakers) than that of ordinary stereo regeneration.

- Dolby Pro Logic

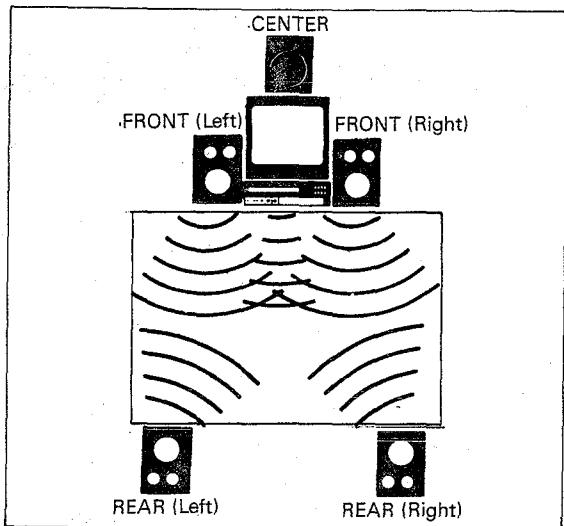
With a great number of movies made recent time, the sound track is specially encoded with the Dolby Surround mode carrying the  **DOLBY SURROUND** trademark*. The front speakers provide the dialogue and the normal stereo effect, while the rear speakers reproduce the surround signals. This position provides excellent results when watching television programs, video software, video discs or video tapes of stereo television broadcasts with Dolby Surround encoded.

Dolby stereo films have dramatically changed the role of the movie-goer from that of observer to that of participant. Clearer dialogue, richer music, enveloping ambience, on-screen, making high-fidelity multi-dimensional sound an essential part of cinema presentations. Imagine recreating the same sort of audio-visual experience right in your own home...

- Manufactured under licence from Dolby Laboratories Licensing Corporation. "DOLBY", "Pro Logic" and the  are trademarks of Dolby Laboratories Licensing Corporation.

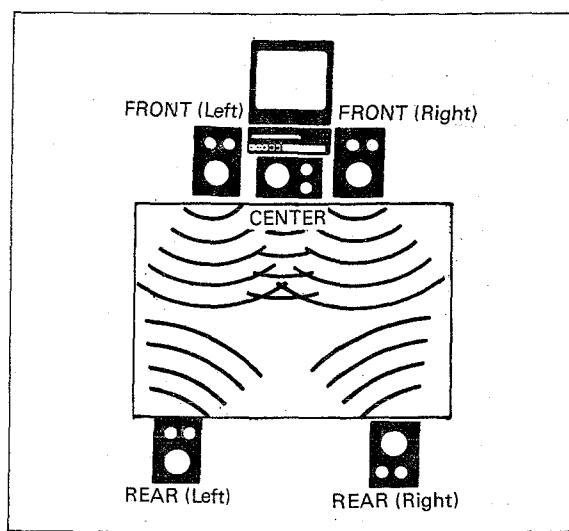
Speaker Installation

The ES-5030R incorporates a decoder which reproduces the specially encoded surround sound of Dolby surround video programs. In the Dolby surround mode, select the speaker operation mode according to your speaker system.



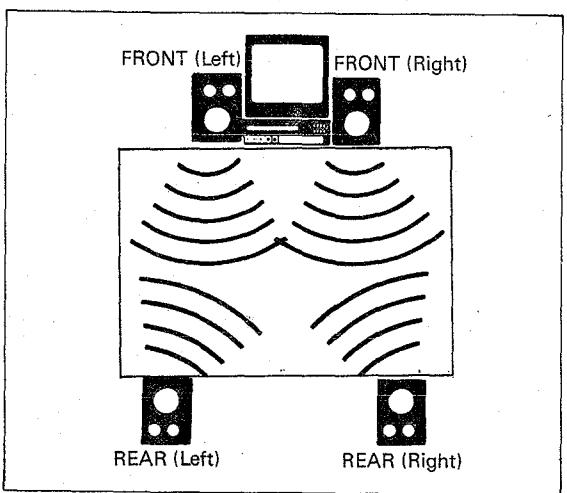
NORMAL mode

Select this mode if you use a small center speaker. The bass sound of the center channel is output from the front speakers.



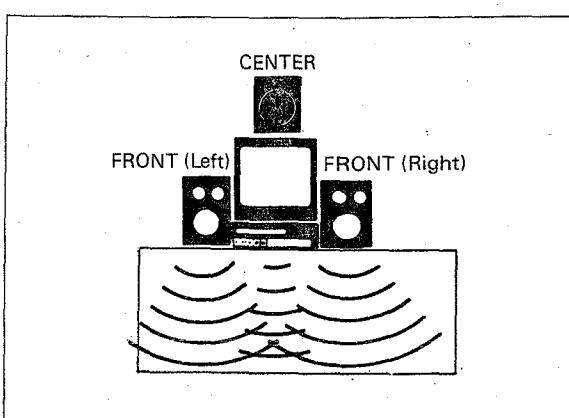
WIDE mode

Select this mode if you use a medium to large center speaker.



PHANTOM mode

Select this mode when you play back a Dolby surround program source without using a center speaker. The sound of the center channel is output from the front (L and R) speakers.



3 stereo mode

Select this mode when you play back a Dolby surround program source only with the front and center speakers.

Operation

ENGLISH

1. Set the volume control to extreme counterclockwise position.
2. Turn the power on so that display panel is illuminated.
 - If no indicators light up
 - The set is not switched on.
 - The apparatus has not been connected to the power line.
 - The electrical output may be without power.
3. Switch on a desired external sound source connected to the input jacks of the rear or the front panel. The external source may be not only VCR 1, VCR 2, VCR 3, BS/TV, VDP but also CD, TUNER, PHONO, TAPE 1 or TAPE/MONITOR of external Amplifier.
4. Operate the sound source selected for playback.
5. Slowly rotate volume control clockwise until you reach the desired sound level.
 - If you hear nothing
 - Are you sure the speakers have not been switched off?
 - Have you pressed the select button for the sound source connected? Does the corresponding display indicator light up?
 - Are you sure this sound source function properly?
 - Is the volume control 'open' enough? Do not leave it in extreme clockwise position.
 - Have the speakers been connected properly? Have the plugs been inserted deep enough into jacks?
When checking this, turn off the power of the unit.

PLAYING AND RECORDING VIDEO TAPES.

- Playing a Video source.

To play a video tape, load the tape into the VCR or camcorder connected to either VCR 1, VCR 2 or VCR 3 INPUT. Press the button (VCR 1, VCR 2 or VCR 3) that corresponds to the jack the VCR is connected to. Follow the VCR's instructions to begin playback. If you connect a TV monitor to the VIDEO MONITOR jack, you can view the program on that monitor.

- Copying a Video Cassette Tape

Follow these steps to copy a video tape from one VCR to another.

- 1) Load the tape you want into the VCR connected to VCR 1, VCR 2 or VCR 3 input jacks.
- 2) Load a blank tape or one you want to record over into one or both of the VCRs connected to the VCR 1 and VCR 2 jacks.
- 3) Press the VCR button (VCR 1, VCR 2 or VCR 3) that corresponds to the VCR you want to record from.
- 4) Start recording and playing on the VCRs.

- Combining an Audio and Video Program (Simulcast)

You can select an audio program from one source, and a video program from another source. You could use this feature to view and dub simulcast.

- I. Viewing simulcast

- 1) Press the AUDIO INJECTION button.
- 2) Press CD, TUNER, PHONO, TAPE 1 or TAPE/MONITOR, etc. to select the desired audio source of the amplifier connected with ES-5030R.
- 3) Press VCR 1, VCR 2 or VCR 3 to select the desired video source.
- 4) Start playing both the audio and video sources.

II. Dubbing simulcast

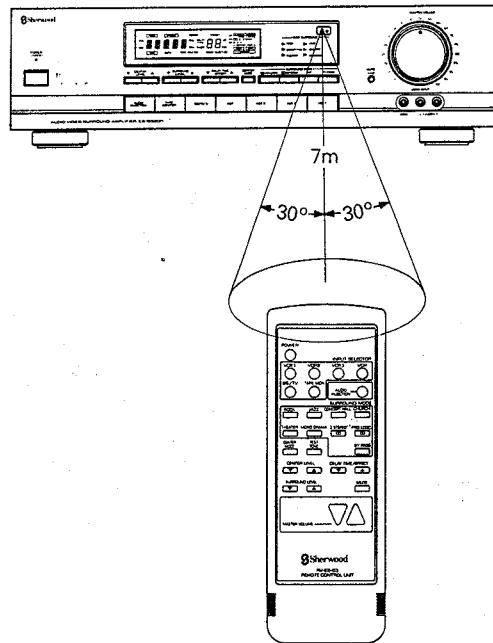
- 1) Follow steps 1, 2 and 3 from copying procedure and step 2 from viewing procedure.
- 2) Select the desired audio source of the amplifier connected with ES-5030R.
- 3) Start recording and playing.

* TEST TONE function does not operate when video dubbing.

PROTECTION CIRCUITS

This Amplifier has special protection circuits.

- The thermal overload protection circuit automatically turns off the power if it begins to overheat.
- The overdrive protection circuit automatically turns off the power if it is about to deliver too much power.
- The short protection circuit automatically turns off the power if the speaker terminals are shorted.

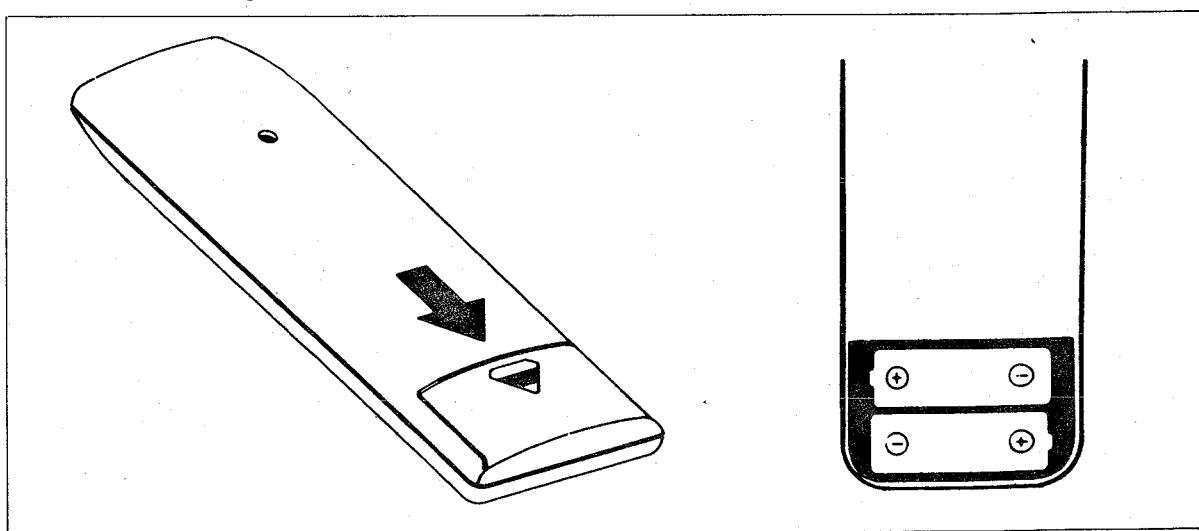


CONCERNING USE OF BATTERIES

- Open the cover by sliding it as shown.
- Insert two size "AA" (R6) batteries, matching the polarity and close it.

NOTE:

1. Replace them with two new batteries when the remote control does not operate the unit.
2. Remove the batteries if it is not to be used for an extended period of time.
3. Do not use rechargeable batteries (Ni-Cd type).



Remote Controls

1. POWER BUTTON

Press this button to on. Press again to off.

2. AUDIO INJECTION BUTTON

Press the button on when it is necessary to replace the sound of VCR or VDP with that of an AUDIO source such as CD during video dubbing.

3. INPUT SELECT BUTTONS

These are buttons for selecting desired program sources. The applicable buttons are VCR 1, VCR 2, VCR 3, BS/TV, VDP and TAPE MONITOR.

4. SURROUND and DSP MODE SELECT BUTTONS

Select the desired mode among OFF, Dolby 3 stereo, Dolby Pro Logic, Rock, Jazz, Concert hall, Church, Theater and Mono Drama.

5. DELAY TIME/SOUND EFFECT BUTTONS.

Operates only when the surround mode is on.

(Dolby Pro Logic mode)

15ms \longleftrightarrow 20ms \longleftrightarrow 25ms \longleftrightarrow 30ms

(DSP mode)

10 \longleftrightarrow 20 \longleftrightarrow 30 \longleftrightarrow \longleftrightarrow 90

6. TEST TONE BUTTON

Operates when the Dolby Pro Logic or the Dolby 3 stereo mode is selected. The test tone duration is about 2 sec per channel. Adjust the speaker level controls so that all speakers sound equally loud from the listening position for the optimum sound effect.

7. CENTER MODE BUTTON

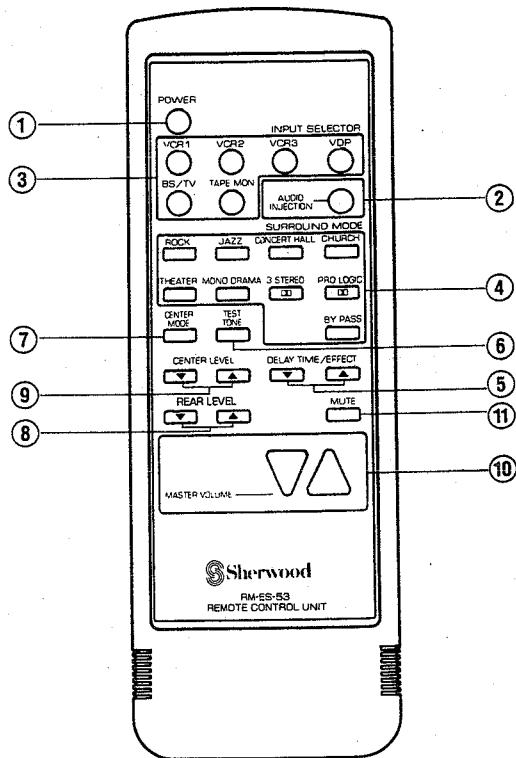
Select the desired mode for the Dolby Pro Logic or the Dolby 3 stereo.

(Dolby Pro Logic mode)

→OFF→NORMAL→WIDE→PHANTOM

(Dolby 3 stereo mode)

→NORMAL→WIDE



8. REAR LEVEL UP/DOWN BUTTONS

Adjust the sound level of the rear speakers.

9. CENTER LEVEL UP/DOWN BUTTONS

Adjust the center level in the normal or wide mode of the Dolby Pro Logic and the Dolby 3 stereo function.

10. MASTER VOLUME UP/DOWN BUTTONS

Adjust the overall volume of the front, center and rear speakers together.

11. MUTE BUTTON

This button is used to temporarily cut sound volume. When the mute button is pressed again, the muting is canceled.

In Case of Difficulty

If your Amplifier does not perform as expected, see the table below before consult with your dealer or service representative.

SYMPTOM	CAUSES	REMEDY
No power	1. Power cord not plugged in. 2. Poor connection at wall outlet. (Power outlet inactive)	1. Check plug contact. 2. Check outlet using lamp or other appliance (outlet may be controlled by a wall switch).
No sound from the front speakers.	1. Speaker cords are disconnected.	1. Check speaker connections (on the external Amplifier).
No sound from the rear speakers.	1. SURROUND mode is set to off. 2. Rear level volume is too low. 3. Monaural source is used.	1. Select a surround mode. 2. Adjust the volume level of the rear channel. 3. Change the source to the stereo or surround source.
No sound from the center speaker	1. Dolby Pro Logic or Dolby 3 stereo mode is not selected. 2. Center level volume is too low. 3. CENTER mode is set to Phantom.	1. Select the Dolby Pro Logic or Dolby 3 stereo mode. 2. Adjust the volume level of the center channel. 3. Set the CENTER mode to Normal or Wide.
No sound is heard, even when the desired program source is selected.	1. The mute button is pressed. 2. Volume is too low. 3. One or both of the input cords are disconnected. 4. Tape MONITOR button is in the ON position.	1. Press the mute button to cancel. 2. Adjust the volume. 3. Connect input cords securely and correctly. 4. Press the button again to the OFF position.
Remote control does not work.	1. Batteries are not loaded, or exhausted. 2. The remote sensor is obstructed.	1. Replace the batteries with new ones. 2. Remove the obstacle from the remote sensor.

Specifications

FRONT OUTPUT SECTION

Input Sensitivity of Front out for 1V, 47kΩ, at 1KHz line inputs.....	150mV
Frequency Response (-3dB)	10Hz~55KHz
THD of front out, 1V out, 1KHz.....	0.005%
Signal to Noise Ratio, IHF "A" Weighted.....	95dB

DIGITAL SIGNAL PROCESSOR SECTION

Rear Channel Power out Continuous RMS with no more than 0.5% THD.....	25W+25W
Center Channel Power out Continuous RMS with no more than 0.05% THD	50W
Frequency Response	
Rear Channel at -3dB	100Hz~6.2KHz
Center Channel at -3dB	
Normal	100Hz~15KHz
Wide	30Hz~15KHz
Signal to Noise Ratio, IHF "A" weighted	
Rear Channel	68dB
Center Channel	83dB
Pre Output	
Rear Channel.....	1.5V
Center Channel	1.5V

OTHER SECTION

Power Consumption (without outlet).....	230W
Unit Dimensions (W×H×D)	440×110×280mM
Unit Weight	6.5Kg

NOTE: Design and specification subject to change without notice improvements.

Auspacken und Aufstellen

Wir beglückwünschen Sie zu Ihren Kauf!

Ihr neuer High-Fidelity Verstärker ist auf Jahre ungetrübten Klanggenusses und störungsfreien Betriebs hin ausgelegt. Nehmen Sie sich bitte ein wenig Zeit, um diese Anleitung sorgfältig durchzulesen. Hier werden die Eigenschaften und der Betrieb Ihres Verstärker erläutert, und Sie erfahren, wie das Gerät fehlerfrei angeschlossen wird.

Packen Sie Ihren Verstärker bitte vorsichtig aus. Wir empfehlen, den Karton und das Verpackungsmaterial aufzuheben. Das kann von Vorteil sein, wenn Sie das Gerät einmal transportieren müssen oder wenn es zur Reparatur geschickt werden sollte. Ihr Verstärker muß waagerecht aufgestellt werden, und hinter dem Gerät sollten mindestens 5 cm Platz gelassen werden, um eine ausreichende Belüftung und den Kabelanschluß zu ermöglichen. Um vorzeitige Beschädigungen zu vermeiden, dürfen Sie das Gerät auf keinen Fall in der Nähe von Heizkörpern, vor Warmluftöffnungen, in direktem Sonnenlicht oder an sehr feuchten bzw. staubigen Orten aufstellen.

Schließen Sie die übrigen Bausteine Ihrer Anlage so an, wie es im folgenden Kapitel beschrieben wird.